

DEALING WITH CASING PRESSURE – A Manufacturer's Perspective

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A War of Words?

- 1988 – 30 CF monitor CP c
- MMS has wri



- API Specifica valve outlet s
- API Specifica Drastically a



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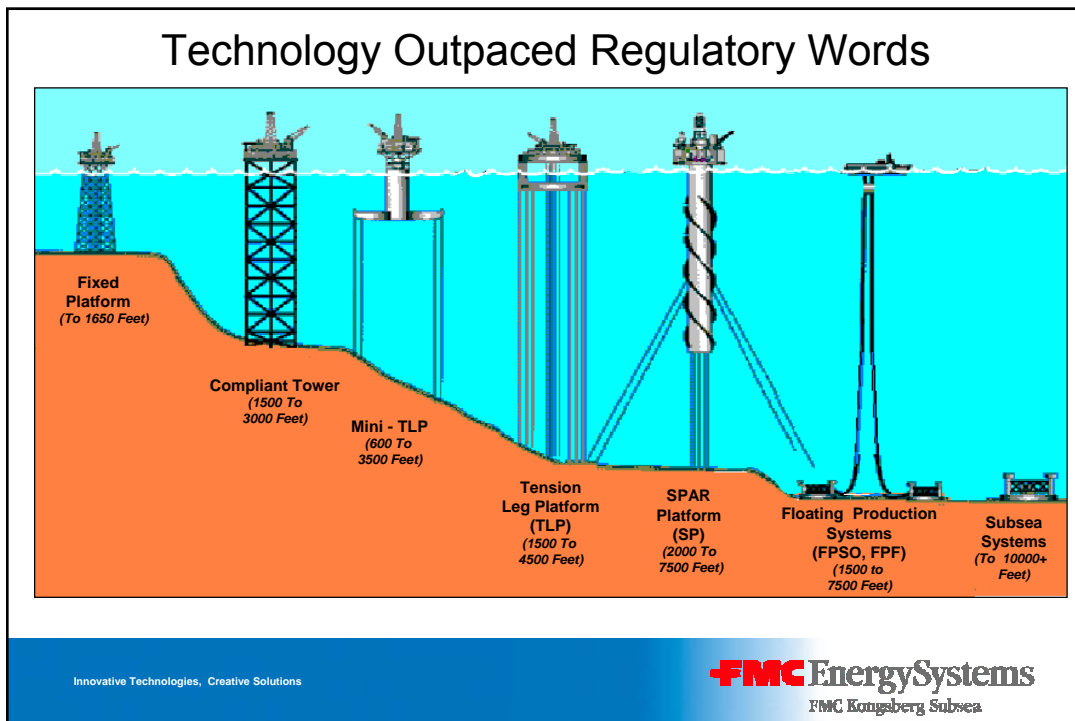
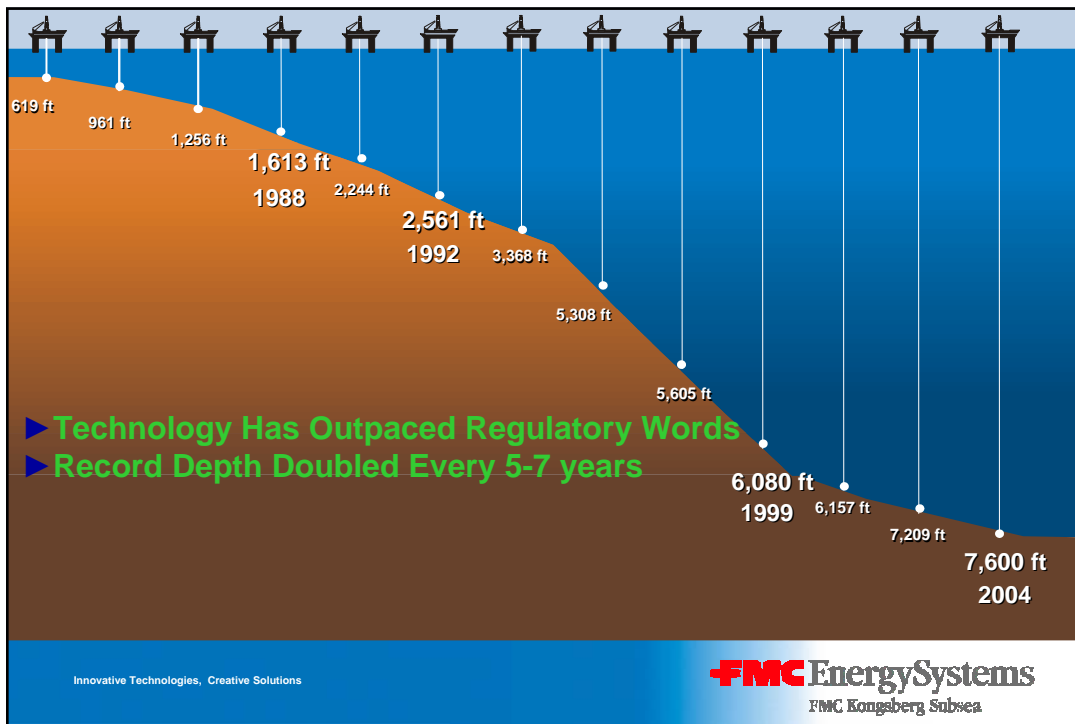
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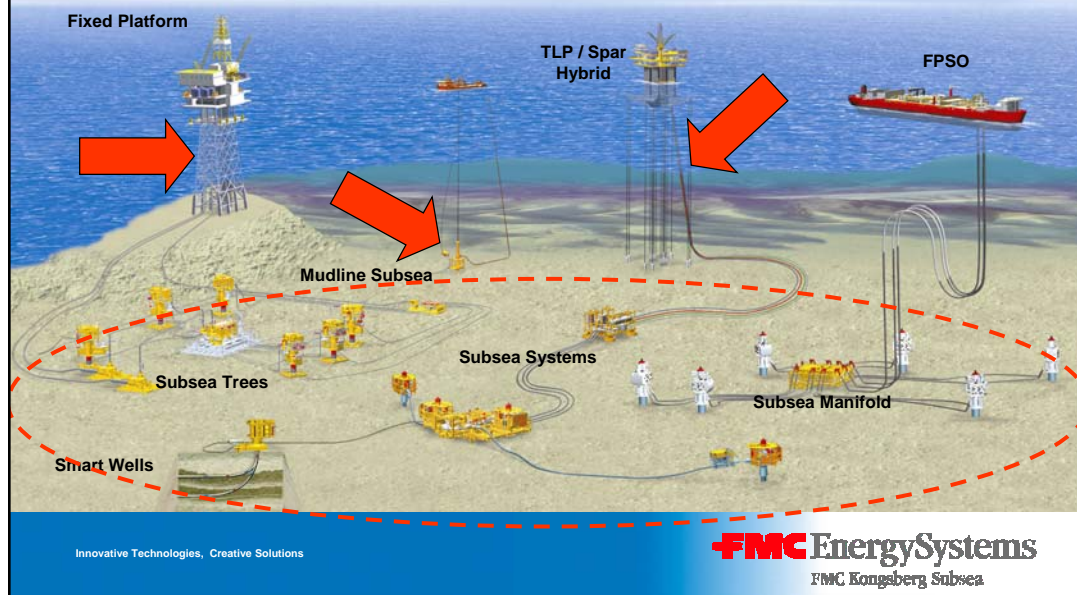
**I WANT YOU
TO FIGURE THIS OUT!**

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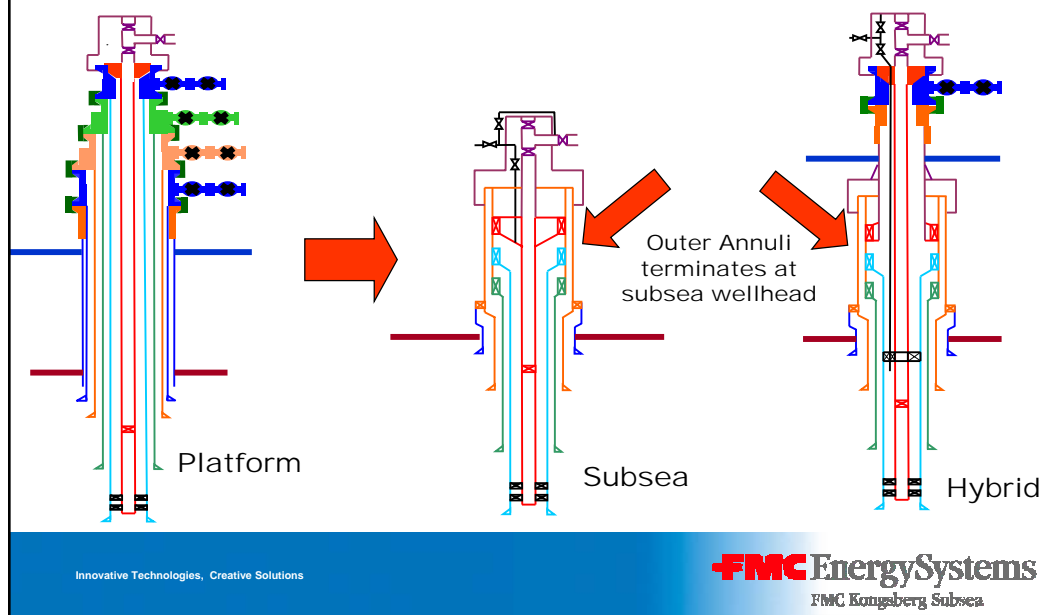
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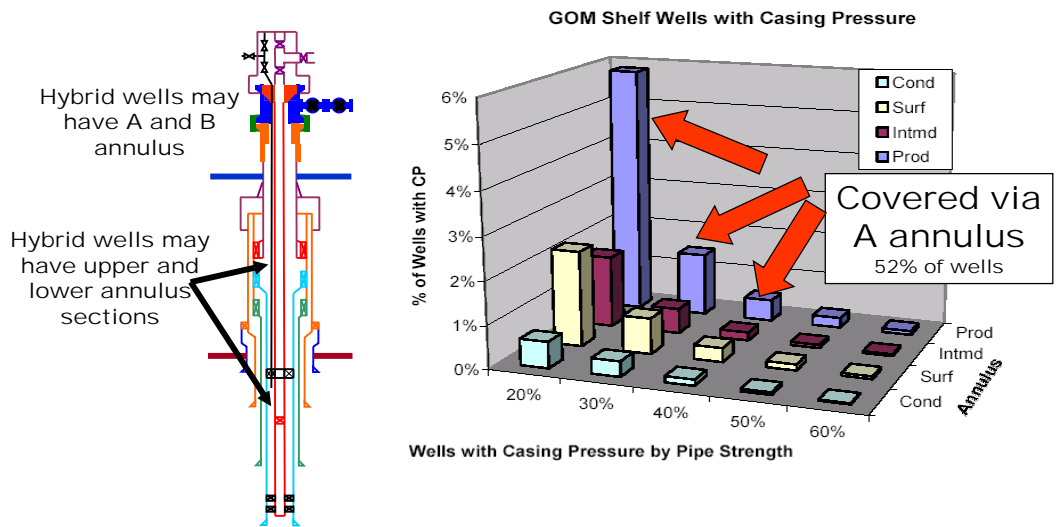
Offshore Systems – Tieback Options



Gaining "Access" isn't easy



Monitoring CP is already apart of standard design

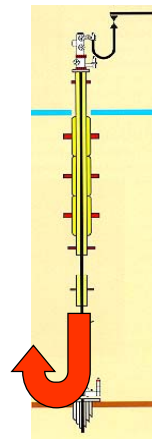


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Challenges to Barriers / Porting for CP

- **Penetrations through wellhead could lead to a “U-tube” effect during drilling**
Solid and dual barriers seen as more reliable
- **Maintain Annular Isolation During Drilling**
- **How do you Isolate for Recompletions?**



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Challenges to Porting for CP

- Most “Access” Options Involve Small Porting Diameters – Prone to Plugging & Won’t Know Until It’s Too Late

Hose Collapse

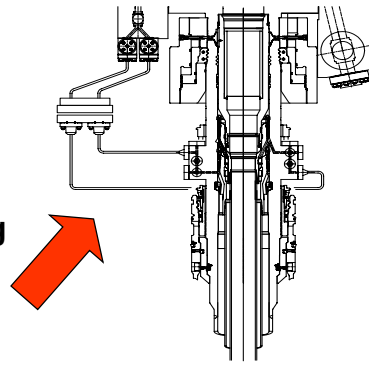
Hydrate / Wax Plugs

Most want 2” Ports – only provide ½”

- Maintain Annular Isolation During Drilling, Then Provide Access During Completion

Drilling “dirty” business – plug ports

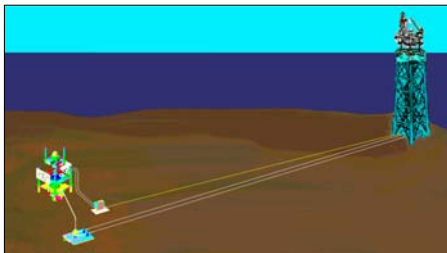
Re-completion – isolate then reopen ports



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Challenges to Monitoring for CP



- ◆ Single Tiebacks tend to be simple with minimal controls and minimal diagnostic tools
 - Offset distance “plays tricks”
 - How long can one wait for things to stabilize vs. flow assurance “cool down”



- ◆ Complex fields have more sophisticated controls and data collection capability
 - Seems that at least one well in field has to be on test (sheer numbers)
 - Influence of other wells while trying to isolate and test well
 - How much intervention
 - Dormancy

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Manufacturer's Concerns

- **Standard practice for hybrid and subsea “at odds” with MMS words; not intent**
 - A annulus is standard practice; Outer annuli are not; Offset distance compounds monitoring problems
- **Concern that providing ports for outer annuli – “overwhelming”**
 - Reliability /Past History vs. New Designs ; Small Ports - “iffy”
- **Concern for drilling barrier control vs. completion annulus access**
- **Concern that the “fix” might be relegated to contractors changing their products/services and bear the burden**

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